

THE
PROCEEDINGS
OF
THE PHYSICAL SOCIETY

FROM JANUARY 1938 TO NOVEMBER 1938

VOLUME 50

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CONTENTS

Part 1. 1 January 1938

	PAGE
J. ALAN CHALMERS and F. PASQUILL. The electric charges of single raindrops and snowflakes	1
G. W. BRINDLEY and F. W. SPIERS. The measurement in absolute units of the intensities of x-ray reflections from crystalline powders	17
S. C. BRADFORD. The kinetic theory of fluids	30
G. L. J. BAILEY, S. FORDHAM and J. T. TYSON. The surface structure of liquid mercury	63
MARY D. WALLER. Vibrations of free circular plates. Part 1: Normal modes	70
MARY D. WALLER. Vibrations of free circular plates. Part 2: Compounded normal modes	77
MARY D. WALLER. Vibrations of free circular plates. Part 3: A study of Chladni's original figures	83
J. TANDBERG. A note on the optimum counting-time for measuring the intensity of a radio-active source	87
H. T. FLINT. The ratio of the masses of the fundamental particles	90
G. W. BRINDLEY and P. RIDLEY. Atomic scattering factors of aluminium, potassium chloride and copper for x rays	96
R. C. PARKER. The nature of fatigue in the auditory system	108
C. C. PATERSON. The appraisalment of lighting	119
Demonstration of structures proposed for protein molecules	141
Demonstration of magneto-damping in nickel	144
Demonstration of a plane-electrode demountable thermionic tube used as a generator of ultra-high-frequency oscillations	146
Reviews of books	149

Part 2. 1 March 1938

L. C. TYTE. The rate of viscous flow of metals: Part 1, tin	153
E. P. HARRISON and H. ROWE. An impedance magnetometer	176
E. E. WIDDOWSON and F. C. CHAMPION. The application of the absorption method to the determination of the upper limits of continuous β -ray spectra	185
N. F. MOTT. Note on the theory of photoconductivity	196
R. W. B. PEARSE and A. G. GAYDON. The spectrum of manganese hydride, MnH	201
F. LLEWELLYN JONES and W. R. GALLOWAY. The sparking potential of mercury vapour	207
C. D. ELLIS. A note on nuclear selection rules	213
A. B. WHATMAN and R. A. HAMILTON. High-latitude radio observations	217
J. E. BEST and J. A. RATCLIFFE. The diurnal variation of the ionospheric absorption of wireless waves	233

	PAGE
J. C. M. BRENTANO. A comparison of the mixed-powder and substitution methods in the quantitative evaluation of x-ray reflections from crystalline powders	247
A. HUNTER and R. W. B. PEARSE. Sensitivity of photographic plates in the region 2500-2000 Å.	256
J. W. PERRY. Monochromators for purposes of irradiation	265
C. A. BEEVERS and H. LIPSON. On the evaluation of some hexagonal structure factors	275
R. SCHMID, L. GERÖ and J. ZEMPLÉN. Dissociation energy of the CN molecule	283
A. E. BATE. Note on the whispering gallery of St Paul's Cathedral, London	293
R. COCKBURN. The variation of voltage-distribution and of electron transit time in the space-charge-limited planar diode	298
L. C. TYTE. The rate of viscous flow of metals: Part 1, tin (Discussion)	311
Reviews of books	313

Part 3. 2 May 1938

R. J. LYTGOE. The structure of the retina and the role of its visual purple	321
H. T. FLINT and W. WILSON. The fundamental unit of electric charge	340
M. BENJAMIN, R. J. HUCK and R. O. JENKINS. Oxide-coated cathodes: 1. Particle-size and thermionic emission	345
HANNES ALFVÉN. A simple scale-of-two counter	358
J. E. R. CONSTABLE. The prevention of the transmission of sound along water pipes	360
J. E. R. CONSTABLE. The transmission of sound in a building by indirect paths	368
H. MILLER and J. W. STRANGE. The electrical reproduction of images by the photoconductive effect	374
G. D. YARNOLD. The equilibrium of a ball supported by a vertical air-jet	385
PROFESSOR E. A. OWEN and I. G. EDMUNDS. An x-ray study of the superlattice in certain alloys	389
J. S. PRESTON. The relative luminosity of radiation at wave-lengths 5780 and 5461 Å. for the average photometric observer	398
L. F. BATES and C. J. W. BAKER. The purification and magnetic properties of mercury	409
L. ESSEN. A new form of frequency and time standard	413
H. BELL and A. HARVEY. A rotational analysis of bands of lead sulphide	427
Demonstration of a laboratory method for the determination of the period of the transverse oscillations of flexible rods by means of a photoelectric cell. By G. A. BENNETT and J. E. CALTHROP	436
Demonstration of some effects produced by the irradiation of liquids and gels with alpha, beta and gamma rays and neutrons. By F. L. HOPWOOD and J. T. PHILLIPS	438
Obituary notices:	
ERNEST, FIRST BARON RUTHERFORD OF NELSON, NEW ZEALAND, AND CAMBRIDGE	441
SIR HERBERT JACKSON	467
The variation of voltage-distribution and of electron transit time in the space-charge-limited planar diode. By R. COCKBURN, M.Sc., A.Inst.P. (Discussion)	476
Reviews of books	478

Contents

vii

Part 4. 1 July 1938

	PAGE
RALPH H. V. M. DAWTON. The elastic properties of sodium wires between -183° and 90° c.	483
A. L. REIMANN. Thermionic emission from carbon	496
G. W. BRINDLEY and P. RIDLEY. An x-ray study of lattice-distortion in rhodium	501
W. BETTERIDGE. The crystal structure of cadmium-indium alloys rich in indium	519
J. G. DAUNT and K. MENDELSSOHN. A simple type of helium cryostat	525
R. D. HILL and A. A. TOWNSEND. Intensity of γ radiation produced by slow neutrons	534
G. D. YARNOLD. The motion of a mercury index in a capillary tube	540
J. MAY. The propagation of supersonics in capillary tubes	553
G. MILLINGTON. Attenuation and group retardation in the ionosphere	561
R. K. ASUNDI, M. KARIM and R. SAMUEL. Emission bands of SiCl_3 and SnCl_3	581
N. W. ROBINSON. The acoustical conductivity of orifices	599
A new demonstration of the phenomenon of beats	616
Reviews of books	618

Part 5. 1 September 1938

L. R. G. TRELOAR and D. H. LANDON. Secondary-electron emission from nickel, cobalt and iron as a function of temperature	625
JAMES A. DARBYSHIRE. Diffraction of electrons by oxide-coated cathodes	635
W. M. HAMPTON and J. G. HOLMES. The flashing character of aerodrome floodlight beacons	642
ALBERT CAMPBELL. The mutual shunt method of measuring self inductance at radio frequencies	655
J. H. NELSON. Anomalous trichromatism and its relation to normal trichromatism	661
M. R. HOPKINS. Heat-conduction in a medium having thermal properties depending on the temperature	703
L. C. JACKSON. The principal paramagnetic susceptibilities of potassium ferri-cyanide at low temperatures	707
R. W. B. PEARSE and A. G. GAYDON. A note on the spectrum of cadmium fluoride, CdF	711
A. G. GAYDON. Colour sensations produced by ultra-violet light	714
E. C. ATKINSON. The dissipation of energy by a pendulum swinging in air	721
E. C. ATKINSON. The amplitude deviation of rate of a pendulum: a second experiment	742
G. W. BRINDLEY and P. RIDLEY. An x-ray investigation of atomic vibrations in magnesium between 86° and 293° K.	757
F. T. FARMER, C. B. CHILDS and A. COWIE. Critical-frequency measurements of wireless waves reflected obliquely from the ionosphere	767
R. JACKSON and A. G. QUARRELL. Electron-diffraction by the split-shutter method and a new (back-reflection) method	776

	PAGE
J. D. CRAWSHAW. An investigation of cosmic-ray showers produced under thirty metres of clay	783
D. B. MACLEOD. The frequency of vibration of molecules in liquids and its relation to viscosity	788
G. MILLINGTON. The relation between ionospheric transmission phenomena at oblique incidence and those at vertical incidence	801
S. TOLANSKY and G. O. FORESTER. The nuclear magnetic moment of copper	826
C. SYKES and H. WILKINSON. The specific heat of nickel from 100° C. to 600° C.	834
L. HARTSHORN. The construction of molecular models of dielectrics	852
E. C. ATKINSON, reply to discussion	856
Reviews of books	858

Part 6. 1 November 1938

T. SMITH. Vision through optical instruments	863
F. H. NICOLL. The focusing properties of the electrostatic field between two cylinders	888
H. T. FLINT. The analogy between the photon and the electron and the derivation of the quantum equation	899
W. JEVONS. A note on the near ultra-violet band system of SnO	910
E. W. H. SELWYN. Note on the use of probability paper	914
RALPH H. V. M. DAWTON. The integration of large numbers of x-ray crystal reflections	919
F. C. CHALKLIN, S. S. WATTS and S. P. HILLSON. A concave-grating vacuum spectrograph for wave-lengths 15 to 1000 Å.	926
J. R. ATKINSON, N. R. CAMPBELL, E. H. PALMER and G. T. WINCH. The accuracy of rectifier-photoelectric cells	934
S. R. SAVUR. A problem in coin-tosses	947
Discussion on electron-diffraction and surface structure	961
Obituary Notices:	
DAVID BAXANDALL	968
A. M. CODD	969
C. W. S. CRAWLEY	969
CHARLES-ÉDOUARD GUILLAUME	971
EMERITUS PROFESSOR WILLIAM STROUD	973
THOMAS SMITHIES TAYLOR	975
Reviews of Books	976
Index to volume 50	981

PROCEEDINGS AT THE MEETINGS OF THE PHYSICAL SOCIETY

SESSION 1937-38

*Except where the contrary is stated the meetings were held at the Imperial
College of Science and Technology, South Kensington,
the President being in the Chair.*

8 October 1937

H. G. Kuhn was elected to Fellowship of the Society.

The President announced that Council had elected the following to Student Membership of the Society: R. E. Burgess, Dennis Albert Nicholls, Frederick Haydn Vanstone.

The following papers were read:

"The electric charges on single raindrops and snowflakes", by J. A. CHALMERS, M.A., Ph.D. and F. PASQUILL, B.Sc.

"The kinetic theory of fluids", by S. C. BRADFORD, D.Sc.

The following papers were read in title:

"The measurement of the intensities of x-ray reflections from crystalline powders in absolute units", by G. W. BRINDLEY, M.Sc., Ph.D. and F. W. SPIERS, Ph.D.

"The electrical resistance of manganese amalgams", by L. F. BATES, D.Sc., Ph.D., F.Inst.P. and P. G. DAY, B.Sc.

"The magnetic properties of silver amalgams", by L. F. BATES, D.Sc., Ph.D., F.Inst. P. and A. W. IRELAND, B.Sc.

Prof. H. FREUNDLICH gave a demonstration entitled "Wettability in flotation".

22 October 1937

The President announced that Council had elected the following to Student Membership of the Society: Edwin Allard, P. Howard-Flanders.

The Twenty-second Guthrie Lecture was delivered by Dr C. C. PATERSON, O.B.E., M.I.E.E., F.Inst.P., of the Research Laboratories of the General Electric Company Limited, who took as his subject "The Appraisalment of lighting".

12 November 1937

The following were elected to Fellowship of the Society: Alexander Keir Longair, George Thomson Purves, Raoul Frederic Schmid, William John Thomas.

It was announced that Council had elected R. C. Pankhurst to Student Membership of the Society.

The following papers were read:

"The surface structure of liquid mercury", by G. L. J. BAILEY, S. FORDHAM and J. T. TYSON.

"The ratio of the masses of the fundamental particles", by H. T. FLINT, D.Sc.

The following papers were read in title:

"Atomic scattering factors of aluminium, potassium chloride and copper for x rays", by G. W. BRINDLEY, M.Sc., Ph.D. and P. RIDLEY, B.Sc.

"A note on the optimum counting-time for measuring the intensity of a radioactive source", by J. TANDBERG.

A demonstration of structures proposed for protein molecules was given by Dr DOROTHY M. WRINCH.

26 November 1937

Meeting held in the Physics Department, London (R.F.H.) School of Medicine for Women, 8 Hunter Street, London, W.C.1 (by kind invitation of the Council and Miss M. D. Waller).

The following were elected to Fellowship of the Society: Neville Samuel Billington, Edward Roy Davies, Rhisiart Morgan Davies, Patrick Docksey, Arthur Robert Hogg, Oliver Owen Pulley, James Harvey Nelson (transfer from Student), John Richard Tillman (transfer from Student).

The following paper was read:

"Vibrations of free circular plates", by Miss M. D. WALLER. Part I. Normal modes. Part II. Compounded normal modes. Part III. A study of Chladni's original figures.

The following papers were read in title:

"The nature of fatigue in the auditory system", by R. C. PARKER, Ph.D.

"An impedance magnetometer", by E. P. HARRISON, Ph.D., F.Inst.P. and H. ROWE, B.Sc.

"On the dependence of the rate of viscous flow of metals on the deforming force, and its variation with temperature. Part I. Tin", by L. C. TYTE, B.Sc., Ph.D., F.Inst.P.

"Note on the theory of photo-conductivity", by N. F. MOTT, F.R.S.

The following demonstrations were given:

(i) Magneto-damping in nickel, by Miss M. D. WALLER.

(ii) A demountable plane-electrode thermionic tube used as a generator of ultra-high-frequency oscillations, by Dr W. A. LEYSHON.

9 December 1937

Meeting held in the theatre of the Royal Institution, 21 Albemarle Street, London, W.1, by kind permission of the Managers.

The Thomas Young Oration was delivered by R. J. LYTHGOE, M.A., D.Sc., M.D., B.Ch., of University College, London, who took as his subject "The structure of the retina and the role of its visual purple".

4, 5, 6 January 1938

The Twenty-eighth Annual Exhibition of Scientific Instruments and Apparatus was held at the Imperial College of Science and Technology.

The following discourses were delivered:

"The mechanical amplification of small displacements", by Professor A. F. C. POLLARD.

"Diving in deep water and shallow", by Captain G. C. C. DAMANT.

28 January 1938

Werner Arthur Schneider was elected to Fellowship of the Society.

The prizes and certificates awarded for the ninth Competition in Craftsmanship and Draughtsmanship were presented.

A demonstration of a laboratory method for the determination of the period of transverse oscillations of flexible rods by means of a photoelectric cell was given by J. E. CALTHROP, M.A., M.Sc. and G. A. BENNETT, B.Sc.

The following papers were read:

"The whispering gallery of St Paul's Cathedral, London", by A. E. BATE, Ph.D., M.Sc., F.Inst.P.

"The variation of voltage-distribution and of electron transit time in the space-charge-limited planar diode", by R. COCKBURN, M.Sc., A.Inst.P.

The following papers were read in title:

"The sparking potential of mercury vapour", by F. LLEWELLYN JONES, M.A., D.Phil. and W. R. GALLOWAY, B.Sc.

"The diurnal variation of the ionospheric absorption of wireless waves", by J. E. BEST, Ph.D. and J. A. RATCLIFFE, M.A.

"High-latitude radio observations", by A. B. WHATMAN, B.A. and R. A. HAMILTON, B.A.

"The evaluation of some hexagonal structure factors", by C. A. BEEVERS and H. LIPSON.

"The application of the absorption method to the determination of the upper limits of continuous β -ray spectra", by E. E. WIDDOWSON, M.Sc. and F. C. CHAMPION.

11 February 1938

The following were elected to Fellowship of the Society: Albert Leslie Beedle, Samuel Clement Bradford, John Britton Carne, Arthur William Carter, Constance Griffiths, Victor F. Hess, E. J. A. Kenny, Leslie Thomas Minchin, Robert

Rutherford Nimmo, James Huntley Phillips, David Arthur Bell (transfer from Student), Alfred Gordon Gaydon (transfer from Student).

The President announced that Council had elected Edwin John le Fevre to Student Membership of the Society.

A demonstration was given by R. W. B. PEARSE, Ph.D. and A. G. GAYDON, Ph.D. of two types of discharge tube of high intensity for the production of molecular spectra (i) for use with gases, (ii) for use with refractory substances.

The following papers were read:

"Prevention of sound-transmission along water pipes", by J. E. R. CONSTABLE, M.A., B.Sc., Ph.D.

"Transmission of sound in a building by indirect paths", by J. E. R. CONSTABLE, M.A., B.Sc., Ph.D.

"The electrical reproduction of images by the photoconductive effect", by H. MILLER, M.A., Ph.D. and J. W. STRANGE, B.Sc., A.R.C.S.

The following papers were read in title:

"The spectrum of manganese hydride, MnH ", by R. W. B. PEARSE, Ph.D. and A. G. GAYDON, Ph.D.

"Sensitivity of photographic plates in the region 2500 to 2000 Å.", by A. HUNTER, Ph.D. and R. W. B. PEARSE, Ph.D.

"On the equilibrium of a ball supported by a vertical air jet", by G. D. YARNOLD, M.A., D.Phil.

"Rotational analysis of the bands of lead sulphide", by H. BELL, M.A. and A. HARVEY, Ph.D., F.Inst.P.

25 February 1938

The following were elected to Fellowship of the Society: H. P. Barasch, H. L. Penman, R. A. Buckingham (transfer from Student).

The President announced that Council had elected I. Sharpe and J. C. Weston to Student Membership of the Society.

The Presidential Address was delivered by THOMAS SMITH, M.A., F.Inst.P., F.R.S., who took as his subject "Vision through optical instruments (including the unaided eye, spectacles and more complex systems)".

The following papers were read in title:

"Dissociation energy of the CN molecule", by R. SCHMID, L. GERÖ and J. ZEMPLÉN.

"Oxide-coated cathodes. Part I. Particle-size and thermionic emission", by M. BENJAMIN, Ph.D., R. J. HUCK and R. O. JENKINS, Ph.D.

"An x-ray study of the superlattice in certain alloys", by E. A. OWEN, M.A., Sc.D. and I. G. EDMUNDS, M.Sc., Ph.D.

"On the emission spectrum of $SiCl_2$ and $SnCl_2$ ", by R. K. ASUNDI, S. M. KARIM and R. SAMUEL.

11 March 1938
Annual General Meeting

The minutes of the previous Annual General Meeting were read and accepted as correct.

The reports of the Council and Hon. Treasurer and the accounts were adopted.

The Officers and Council for 1938-9 and the Auditors were elected.

Votes of thanks were accorded to the retiring Officers and Council and to the Governors of the Imperial College of Science and Technology.

Ordinary Meeting

The following were elected to Fellowship of the Society: R. N. Das, F. G. A. Haeghele, B. H. Wilsdon.

A demonstration of some effects of radiation on liquids and gels was given by F. L. HOPWOOD, D.Sc., F.Inst.P. and J. T. PHILLIPS.

The following paper was read:

"A new form of frequency and time standard", by L. ESSEN, B.Sc.

The following papers were read in title:

"The acoustical conductivity of orifices", by N. W. ROBINSON, A.R.C.S., B.Sc., Ph.D.

"The relative luminosity of radiation at wave-lengths 5780 and 5461 Å. for the average photometric observer", by J. S. PRESTON, M.A., A.M.I.E.E., F.Inst.P.

"The fundamental unit of electric charge", by H. T. FLINT, D.Sc., Ph.D. and W. WILSON, D.Sc., Ph.D., F.R.S.

"A simple 'scale-of-two' counter", by H. ALFVÉN.

25 March 1938

The following were elected to Fellowship of the Society: Gordon Owen Baines, Walter Charles Gee.

A demonstration of the phenomenon of beats was given by D. A. RICHARDS, A.R.C.S., M.Sc.

The following paper was read:

"Elastic properties of sodium wires between -183° and 90° C." by R. H. V. M. DAWTON, B.Sc.

The following papers were read in title:

"The purification and magnetic properties of mercury", by L. F. BATES, D.Sc., Ph.D., F.Inst.P. and C. J. W. BAKER, B.Sc.

"The frequency of vibration of molecules in liquids and its relation to viscosity", by D. B. MACLEOD, M.A., D.Sc.

9 April 1938

A demonstration of molecular models of dielectrics was given by L. HARTS-HORN, D.Sc.

The following papers were read:

"The propagation of supersonics in capillary tubes", by J. MAY, M.Sc.

"The motion of a mercury index in a capillary tube", by G. D. YARNOLD, M.A., D.Phil.

The following paper was read in title:

"The crystal structure of cadmium-indium alloys rich in indium", by W. BETTERIDGE, Ph.D.

13 May 1938

S. R. Rao was elected to Fellowship of the Society.

The President announced that Council had elected Philip Charles Bowes to Student Membership of the Society.

The Fifteenth Duddell Medal was presented to Professor H. GEIGER.

The Medallist gave a short account of recent results obtained with his counters on the multiplicative nature of shower formation.

The following paper was read:

"A simple type of helium cryostat", by J. G. DAUNT and K. MENDELSSOHN.
With demonstration.

The following papers were read in title:

"Attenuation and group retardation in the ionosphere", by G. MILLINGTON.

"An x-ray study of lattice distortion in metals. Part I. Intensity and line-width measurements of lattice distortion in rhodium", by G. W. BRINDLEY and P. RIDLEY.

27 May 1938

The following were elected to Fellowship of the Society: William Phelps Allis, Norman Frederick Astbury, James Albert Darbyshire, Niraj Nath Das Gupta, Claude Hurst, K. A. Selliah, William Alfred Wooster, Douglas Percy McKeon (transfer from Student).

A demonstration entitled "Roberval's enigma and its application to weighing mechanisms" was given by W. A. BENTON, F.C.S.

The following paper was read, followed by an informal discussion on Probability:

"A problem in coin-tosses", by S. R. SAVUR, M.A.

The following papers were read in title:

"Intensity of γ -radiation produced by slow neutrons", by R. D. HILL, M.Sc., and A. A. TOWNSEND, M.Sc.

"Thermionic emission from carbon", by A. L. REIMANN.

2 June 1938

Meeting held in the rooms of the Royal Society, Burlington House, London, W. 1 (by kind permission of the President and Council).

The following papers were read:

"Colour sensations produced by ultra-violet light", by A. G. GAYDON, Ph.D., A.Inst.P.

"The flashing character of aerodrome floodlight beacons", by W. M. HAMPTON, Ph.D., F.Inst.P. and J. G. HOLMES, A.R.C.S., B.Sc., F.Inst.P.

"Anomalous trichromatism and its relation to normal trichromatism", by J. H. NELSON, A.R.C.S., B.Sc., A.Inst.P.

10 June 1938

A demonstration of rhodium plating was given by A. W. SCOTT, A.C.G.I., F.I.C.

The following papers were read:

"A method of measuring self-inductance at radio frequencies", by ALBERT CAMPBELL, M.A.

"Secondary-electron emission of nickel, cobalt and iron as a function of temperature", by L. R. G. TRELOAR, B.Sc., F.Inst.P. and D. H. LANDON, B.Sc.

The following papers were read in title:

"The specific heat of nickel from 100° C. to 600° C.", by C. SYKES, D.Sc. and H. WILKINSON, Ph.D.

"The prediction of transmission phenomena at oblique incidence from ionospheric measurements at vertical incidence", by G. MILLINGTON.

"x-ray investigation of atomic vibrations in magnesium between 86° and 293° absolute", by G. W. BRINDLEY, M.Sc., Ph.D. and P. RIDLEY, B.Sc.

24 June 1938

The President announced that Council had elected K. B. S. Wilder to Student Membership of the Society.

The following demonstration was given:

"A low voltage cathode ray tube for visual demonstration of electron diffraction", by J. A. DARBYSHIRE, M.Sc., Ph.D.

The following papers were read:

"The dissipation of energy by a pendulum swinging in air", by E. C. ATKINSON, M.A.

"The amplitude deviation of rate of a pendulum: a second experiment", by E. C. ATKINSON, M.A.

The following papers were read in title:

"Diffraction of electrons by oxide-coated cathodes", by J. A. DARBYSHIRE, M.Sc., Ph.D.

"Heat-conduction in a medium having thermal properties depending on temperature", by M. R. HOPKINS.

"Measurements of the critical frequency of wireless waves reflected obliquely from the ionosphere", by F. T. FARMER, Ph.D., C. B. CHILDS, Ph.D. and A. COWIE, B.Sc.

"The nuclear magnetic moment of copper", by S. TOLANSKY, Ph.D. and G. O. FORESTER, B.Sc.

"An investigation of cosmic-ray showers produced under thirty metres of clay", by J. D. CRAWSHAW, M.Sc.

"Rotational analysis of the ultra-violet band system of germanium monoxide", by A. K. SEN GUPTA, M.Sc.

"The principal paramagnetic susceptibilities of potassium ferricyanide at low temperatures", by L. C. JACKSON, M.Sc., Ph.D.

REPORT OF THE COUNCIL FOR THE YEAR ENDING 28 FEBRUARY 1938

ANNUAL GENERAL MEETING

An annual general meeting was held at the Imperial College of Science and Technology on 12 March 1937, for the presentation and adoption of the Reports of the Council and the Honorary Treasurer and for the election of Officers and Council.

SCIENCE MEETINGS

Seventeen science meetings were held during the period under review. At three of these meetings the Guthrie Lecture, the Thomas Young Oration and the Presidential Address were delivered, the other fourteen being occupied by the presentation and discussion of demonstrations and papers. Fifteen demonstrations were given, 30 papers were read by authors, and 34 papers were read in title only.

Fourteen of the meetings were held in the Physics Department of the Imperial College, by kind permission of the Rector and Governing Body and Professor G. P. Thomson.

One meeting was held on 26 November 1937 at the London (R.F.H.) School of Medicine for Women, Hunter Street, W.C.1, by kind invitation of the School Council and Miss M. D. Waller. Before and after the meeting, exhibits were on view in the Physics department and additional demonstrations were given by Miss Waller, Dr W. A. Leyshon and other members of the Physics staff, who also entertained Fellows and guests to tea.

For optical subjects alone, two evening meetings were held, one for papers on 3 June 1937, in the rooms of the Royal Society, by kind permission of the President and Council, and one for the Thomas Young Oration on 9 December 1937, at the Royal Institution, Albemarle Street, W.1, by kind permission of the Managers. One of the afternoon meetings at the Imperial College, 28 May 1937, also was devoted to demonstrations and papers on optical subjects only.

SUMMER MEETING AT GREENWICH

A visit was paid on 26 June 1937 to the Fuel Research Station, East Greenwich, by kind invitation of the Director, Dr F. S. Sinnatt. An introductory address by Dr Sinnatt was followed by a tour of the laboratories where many demonstrations were given by members of the research staff.

Lunch and tea were taken at the National Maritime Museum, Greenwich; and a tour of the museum was made during the afternoon, after an explanatory address by the officer-of-the-day.

CONFERENCE AT BRISTOL

By the kind invitation of Professor A. M. Tyndall, meetings took place at the H. H. Wills Physical Laboratory of the University of Bristol during the four days 13-16 July 1937, when a Conference on the Conduction of Electricity in Solids was held under the joint auspices of the Society and the University of Bristol. The papers read and discussed at this conference were published in an extra part of Volume 49 of the *Proceedings of the Physical Society*.

GUTHRIE LECTURE

The twenty-second Guthrie Lecture was delivered on 22 October 1937 at the Imperial College by Dr C. C. Paterson, who took as his subject "The Appraisalment of Lighting".

THOMAS YOUNG ORATION

At the Royal Institution on 9 December 1937, Dr R. J. Lythgoe delivered the tenth Thomas Young Oration on "The Structure of the Retina and the Role of its Visual Purple".

PRESIDENTIAL ADDRESS

The retiring President, Mr T. Smith, delivered his Address to the Society on 25 February 1938 at the Imperial College, the subject being "Vision through Optical Instruments".

DUDELL MEDAL

The fourteenth Duddell Medal, the award of which was announced in the previous report of the Council, was presented on 9 July 1937 to Professor W. G. Cady of the Wesleyan University, Middletown, Connecticut, U.S.A., for his work on piezo-electric oscillators and resonators as standards of time and frequency.

The Council has awarded the fifteenth Duddell Medal to Professor Hans Geiger, in recognition of his invention and subsequent improvement of his counters.

HERBERT SPENCER BEQUEST

Research Grants

During the period under review, the Council has made the first grants for research in physical science by Fellows of the Society. Five applications for grants were received and considered by the Council, and three grants were made, namely:

- (i) To Dr William H. Taylor, College of Technology, Manchester, for a quartz monochromator to be used in further investigations on the optical properties of metals.
- (ii) To Dr Dorothy M. Wrinch, Lady Margaret Hall, Oxford, for the construction of atomic models of insulin and related molecules.
- (iii) To Professor Herbert Dingle, Imperial College, for the purchase of lithium fluoride and the construction of a vacuum Littrow spectrograph with an optical train of this material.

Purchase of Radium

The Council has decided upon the purchase of 100 milligrams of radium in the form of the sulphate mixed with beryllium to serve as a neutron source. It is intended to loan this radium to Fellows of the Society for purposes of physical research. An application by Professor G. P. Thomson for the loan of it has been approved.

Furnishing of Council Room

The Council Room has been suitably furnished with tables, chairs and carpet. The photographs of the past Presidents of the Society since its foundation have been reframed.

PROGRESS REPORTS

Volume IV, which was recently published, is as comprehensive in scope as the three preceding volumes. The sales of Volume III have been highly satisfactory. The stock of copies of Volume II is almost exhausted and no copies of Volume I are available. The Council has decided that a number of copies of Volumes I and II offered for sale in good condition shall be repurchased by the Society.

ANNUAL EXHIBITION

The Twenty-eighth Annual Exhibition of Scientific Instruments and Apparatus was held on 4, 5 and 6 January 1938 at the Imperial College, by the courtesy of the Governing Body. The attendance during the three days was about 8500.

Seventy-seven firms exhibited their products in the Trade Section; in addition three firms displayed technical literature. The Research and Educational Section was nearly double that of previous years and contained contributions from thirty-seven University laboratories, research associations, Government and industrial laboratories, and private individuals. As in previous years, an Apprentices' and Learners' Competition in craftsmanship and draughtsmanship was held in conjunction with the exhibition, and the work entered for the competition was on view. The prizes and certificates awarded in the competition were presented to successful candidates at the meeting on 28 January 1938.

The following discourses were delivered during the exhibition:

"The Mechanical Amplification of Small Displacements", by Professor A. F. C. Pollard.

"Diving in Deep Water and Shallow", by Captain G. C. C. Damant.

As in previous years, permission was given to the Institute of Physics to publish these discourses in the February number of the *Journal of Scientific Instruments*.

REPRESENTATION OF THE SOCIETY

The Physical Society has been represented on other bodies as follows:

British National Committee for Physics: Mr T. Smith, Mr J. H. Awbery, Professor A. M. Tyndall.

British National Committee for Scientific Radio: Professor E. V. Appleton, Professor L. S. Palmer.

Committee of Management of Science Abstracts: Professor A. Ferguson, Dr D. Owen, Mr J. H. Awbery, Dr W. Jevons.

Board of the Institute of Physics: Dr D. Owen, Dr A. B. Wood.

Joint Committee on Symbols for Thermodynamics: Professor A. Ferguson, Mr J. H. Awbery, Professor A. C. Egerton, Professor G. I. Finch.

British Standards Institution Committee on Optical Projection Apparatus: Professor A. F. C. Pollard, Dr R. S. Clay.

Joint Deputation to the Postmaster General regarding the Suppression of Electrical Interference with Radio: Professor G. I. Finch, Professor E. V. Appleton, Dr D. Owen.

The Society has also been represented at the following functions:

Centenary Celebrations of the University of Durham, 1 and 2 July 1937: Mr T. Smith.

International Congress for Short Waves in Physics, Biology and Medicine, Vienna, 12-17 July 1937: Mr L. V. Kahn-Rein.

International Meeting of Physics, Chemistry and Biology, held in connexion with the Paris Exhibition: 30 September-9 October 1937: Dr H. Shaw.

Celebrations in honour of Professor Charles Fabry on the completion of fifty years of research and teaching, Paris, 3 December 1937: Professor G. Boutry.

AGREEMENT WITH THE INSTITUTE OF PHYSICS

The agreement with the Institute of Physics which expired on 31 December 1937 has been renewed for a further period of three years as from 1 January 1938.

Report of Council

OBITUARY

The Council records with deep regret the deaths of the following Fellows: Dr J. R. Airey, Professor H. E. Armstrong, Mr P. E. Belas, Dr W. N. Bond, Dr A. S. Burgess, Mr W. T. Clough, Mr C. W. S. Crawley, Mr R. Curry, Mr W. B. Ferguson, Mr J. Fleming, Professor A. Griffiths, Professor T. Mather, Professor L. Natanson, Lord Rutherford of Nelson, Mr K. Sunayama, Professor S. Young.

At the funeral of Lord Rutherford in Westminster Abbey, the Society was represented by the President and members of the Council.

MEMBERSHIP ROLL AT 31 DECEMBER 1937

	Total 31 Dec. 1936	Changes during 1937	Total 31 Dec. 1937
<i>Honorary Fellows</i>	11	—	11
<i>Honorary Fellows (Optical Society)</i>	7	—	7
<i>Ex-officio Fellows</i>	4	—	4
<i>Ordinary Fellows</i>	945	Elected 28 Student transfers ... <u>4</u> 32 Deceased 16 Resigned or lapsed ... <u>21</u> 37 Net change 5	940
<i>Students</i>	86	Elected 12 Transferred 4 Resigned or lapsed ... <u>15</u> 19 Net change 7	79
<i>Total Membership</i>	1053	Net decrease 12	1041

REPORT OF THE HONORARY TREASURER FOR THE YEAR ENDED 31 DECEMBER 1937

THE accounts show an excess of income over expenditure amounting to £92. 12s. 10d., which is considered satisfactory.

The publication of the Annual Reports on Progress in Physics continues without involving any charge on the general funds.

During the year the Council provisionally allocated the following amounts from the Herbert Spencer Bequest:

For Joint Library purposes	£300
For Loan for Research purposes:	
Radium, approximately	£410
Quartz Monochromator	£150
Models of Insulin and other molecules	£25

The Finance Committee recommends that the balance of the Optical Convention (1926) Trust Account, amounting to £51. 3s. 2d., be transferred to the General Fund in due course, with the understanding that in the event of another Optical Convention being held, the Council of the day be recommended to grant a sum of at least £60 towards the expenses.

No change has been made in the Society's investments. These have been valued at market prices on 31 December 1937, through the courtesy of the Manager of the Charing Cross Branch of the Westminster Bank.

(Signed) ROBERT W. PAUL
Honorary Treasurer

18 February 1938.

LIFE COMPOSITION FUND ON 31 DECEMBER 1937

	£	s.	d.
41 Fellows paid	£10	.	.
1 Fellow paid	£15	.	.
15 Fellows paid	£21	.	.
28 Fellows paid	£31. 10s.	.	.
	£1464	10	0

SPECIAL FUNDS

W. F. STANLEY TRUST FUND

Carried to Balance Sheet	£	s.	d.	£300 Southern Railway Preferred Ordinary Stock	£	s.	d.
	348	0	0	£442 Southern Railway Deferred Ordinary Stock	261	0	0
	£348	0	0		87	0	0
					£348	0	0

DUDELL MEMORIAL TRUST FUND

CAPITAL

Carried to Balance Sheet	£	s.	d.	£400 War Loan 3½% Inscribed "B" Account	£	s.	d.
	406	0	0		406	0	0

REVENUE

Engraving medal	£	s.	d.	Balance on 31 December 1936	£	s.	d.
Honorary to Medallist	2	2	0	Interest	9	0	0
Balance carried to Balance Sheet	15	0	0		14	0	0
	5	18	9		£23	0	9
	£23	0	9		£23	0	9

OPTICAL CONVENTION, 1926, TRUST ACCOUNT

Balance carried to Balance Sheet	£	s.	d.	Balance on 31 December 1936	£	s.	d.
	51	3	2	Sales of Publications	49	1	0
	£51	3	2	Sundries	1	10	0
					11	0	0
					£51	3	2

A. W. SCOTT BEQUEST

Expenses in connexion with Library	£	s.	d.	Balance on 31 December 1936	£	s.	d.
Balance carried to Balance Sheet	1	3	4		174	15	0
	173	11	11		£174	15	0
	£174	15	3		£174	15	0

"SPECIAL REPORTS ON PHYSICS" ACCOUNT

Balance carried to Balance Sheet	£	s.	d.	Balance on 31 December 1936	£	s.	d.
	83	1	0		83	1	0

HERBERT SPENCER LEGACY

Special Library Expenses	£	s.	d.	Balance on 31 December 1936	£	s.	d.
Furniture for Council Room	87	15	6		1241	0	0
Balance carried to Balance Sheet	123	16	2		£1241	0	0
	1029	8	4				
	£1241	0	0		£1241	0	0